

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Please amend the claims as follows:

Claim 1. (Currently amended) A showerhead that supplies a source gas and a supporting gas into a vacuum atmosphere in a processing vessel, so as to deposit a film on a surface of an object to be processed in the processing vessel, comprising:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber;

a plurality of first supporting-gas ~~getting~~ jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber; and

a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber,

wherein each of the first supporting-gas jetting orifices ~~has is formed into~~ a ring shape that adjacently surrounds a corresponding one of the source-gas jetting orifices, and each of the source-gas jetting orifices is positioned inside the ring of the first supporting-gas jetting orifice,
and

each of the second supporting-gas jetting orifices is arranged between adjacent two of the source-gas jetting orifices.

Claim 2. (Cancelled)

Claim 3. (Original) The showerhead according to claim 1, wherein the source gas contains a high melting point metal.

Claim 4. (Original) The showerhead according to claim 3, wherein the source gas is an organic metal material gas.

Claim 5. (Currently amended) A showerhead that supplies a source gas and a supporting gas into a vacuum atmosphere in a processing vessel, so as to deposit a film on a surface of an object to be processed in the processing vessel, comprising:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber; **and**

a plurality of first supporting-gas ~~jetting~~ ~~getting~~ orifices formed in the gas jetting surface to be communicated with the second diffusion chamber, and

a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber;

wherein each of the source-gas jetting orifices is adjacently surrounded by at least two of the first supporting-gas jetting orifices so that the at least two of the first supporting-gas jetting orifices are arranged around the corresponding source-gas jetting orifice at equally spaced intervals about the corresponding source-gas jetting orifice,

a combination of the corresponding source-gas jetting orifice and the at least two of the first supporting-gas jetting orifices forms a jetting orifice unit, and

each of the second supporting-gas jetting orifices is arranged between adjacent two of the jetting orifice units.

Claim 6. (Cancelled)

Claim 7. (Original) The showerhead according to claim 5, wherein the source gas contains a high melting point metal.

Claim 8. (Original) The showerhead according to claim 7, wherein the source gas is an organic metal material gas.

Claim 9. (Currently amended) A film deposition apparatus that deposits a film on a surface of an object to be processed, by using a source gas and a supporting gas, comprising:

a processing vessel;

an evacuation system that evacuates an inside of the processing vessel to form therein a vacuum;

a table provided in the processing vessel to dispose thereon the object;

a heater that heats the object disposed on the table; and

a showerhead provided on a top part of the processing vessel; the showerhead including:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber;

a plurality of first supporting-gas ~~jetting~~ ~~getting~~ orifices formed in the gas jetting surface to be communicated with the second diffusion chamber; and

a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber,

wherein each of the first supporting-gas jetting orifices ~~has is formed into~~ a ring shape that adjacently surrounds a corresponding one of the source-gas jetting orifices, and each of the source-gas jetting orifices is positioned inside the ring of the first supporting-gas jetting orifice,
and

each of the second supporting-gas jetting orifices is arranged between adjacent two of the source-gas jetting orifices.

Claim 10. (Cancelled)

Claim 11. (Currently amended) A film deposition apparatus that deposits a film on a surface of an object to be processed, by using a source gas and a supporting gas, comprising:

a processing vessel;

an evacuation system that evacuates an inside of the processing vessel to form therein a vacuum;

a table provided in the processing vessel to dispose thereon the object;

a heater that heats the object disposed on the table; and

a showerhead provided on a top part of the processing vessel; the showerhead including:

a showerhead body provided with a gas jetting surface facing an inside of the processing vessel;

a first diffusion chamber formed in the showerhead body to receive the source gas and diffuse the same;

a second diffusion chamber formed in the showerhead body to receive the supporting gas and diffuse the same;

a plurality of source-gas jetting orifices formed in the gas jetting surface to be communicated with the first diffusion chamber; and

a plurality of first supporting-gas ~~jetting~~ ~~jetting~~ orifices formed in the gas jetting surface to be communicated with the second diffusion chamber;[[.]] and

a plurality of second supporting-gas jetting orifices formed in the gas jetting surface to be communicated with the second diffusion chamber;

wherein each of the source-gas jetting orifices is adjacently surrounded by at least two of the first supporting-gas jetting orifices so that the at least two of the first supporting-gas jetting orifices are arranged around the corresponding source-gas jetting orifice at equally spaced intervals about the corresponding source-gas jetting orifice,

a combination of the corresponding source-gas jetting orifice and at least two of the first supporting-gas jetting orifices forms a jetting orifice unit, and

each of the second supporting-gas jetting is arranged between adjacent two of the jetting orifice units.

Claim 12. (Cancelled)